

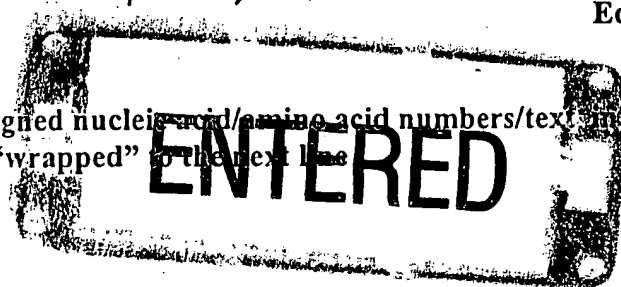
Pg 110

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/506,925

CRF Edit Date: 9/17/04
Edited by: AS

Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line



Corrected the SEQ ID NO. Sequence numbers edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Deleted: _____ invalid beginning/end-of-file text ; _____ page numbers

Inserted mandatory headings/numeric identifiers, specifically:

Moved responses to same line as heading/numeric identifier, specifically:

Other:



PCT

RAW SEQUENCE LISTING

DATE: 09/17/2004

PATENT APPLICATION: US/10/506,925

TIME: 15:30:17

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09172004\J506925.raw

```

1 <110> APPLICANT: Neurogenex Co., Ltd.
3 <120> TITLE OF INVENTION: ENHANCED INSERTED YELLOW FLUORESCENCE PROTEIN AND ITS
4 APPLICATION
7 <130> FILE REFERENCE: PN0023095.00
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/506,925
C--> 9 <141> CURRENT FILING DATE: 2004-09-07
9 <150> PRIOR APPLICATION NUMBER: KR10-2002-0012409
10 <151> PRIOR FILING DATE: 2002-03-08
12 <150> PRIOR APPLICATION NUMBER: KR10-2002-0015217
13 <151> PRIOR FILING DATE: 2002-03-21
15 <150> PRIOR APPLICATION NUMBER: KR10-2002-0015219
16 <151> PRIOR FILING DATE: 2002-03-21
18 <160> NUMBER OF SEQ ID NOS: 16
20 <170> SOFTWARE: KopatentIn 1.71
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 738
24 <212> TYPE: PRT
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: y-citrine of fluorescence protein
31 <400> SEQUENCE: 1
32 Ala Thr Gly Gly Thr Gly Ala Gly Cys Ala Ala Gly Gly Gly Cys Gly
33 1 5 10 15
35 Ala Gly Gly Ala Gly Cys Thr Gly Thr Thr Cys Ala Cys Cys Gly Gly
36 20 25 30
38 Gly Gly Thr Gly Gly Thr Gly Cys Cys Cys Ala Thr Cys Cys Thr Gly
39 35 40 45
41 Gly Thr Cys Gly Ala Gly Cys Thr Gly Gly Ala Cys Gly Gly Cys Gly
42 50 55 60
44 Ala Cys Gly Thr Ala Ala Cys Gly Gly Cys Cys Ala Cys Ala Ala
45 65 70 75 80
47 Gly Thr Thr Cys Ala Gly Cys Gly Thr Gly Thr Cys Cys Gly Gly Cys
48 85 90 95
50 Gly Ala Gly Gly Gly Cys Gly Ala Gly Gly Gly Cys Gly Ala Thr Gly
51 100 105 110
53 Cys Cys Ala Cys Cys Thr Ala Cys Gly Gly Cys Ala Ala Gly Cys Thr
54 115 120 125
56 Gly Ala Cys Cys Cys Thr Gly Ala Ala Gly Thr Thr Cys Ala Thr Cys
57 130 135 140
59 Thr Gly Cys Ala Cys Cys Ala Cys Cys Gly Gly Cys Ala Ala Gly Cys
60 145 150 155 160
62 Thr Gly Cys Cys Cys Gly Thr Gly Cys Cys Cys Thr Gly Gly Cys Cys
63 165 170 175

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/506,925

DATE: 09/17/2004

TIME: 15:30:17

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09172004\J506925.raw

```

65 Cys Ala Cys Cys Cys Thr Cys Gly Thr Gly Ala Cys Thr Ala Cys Cys
66           180           185           190
68 Thr Thr Cys Gly Gly Cys Thr Ala Cys Gly Gly Cys Cys Thr Gly Ala
69           195           200           205
71 Thr Gly Thr Gly Cys Thr Thr Cys Gly Cys Cys Cys Gly Cys Thr Ala
72           210           215           220
74 Cys Cys Cys Cys Gly Ala Cys Cys Ala Cys Ala Thr Gly Ala Ala Gly
75 225           230           235           240
77 Cys Ala Gly Cys Ala Cys Gly Ala Cys Thr Thr Cys Thr Thr Cys Ala
78           245           250           255
80 Ala Gly Thr Cys Cys Gly Cys Cys Ala Thr Gly Cys Cys Cys Gly Ala
81           260           265           270
83 Ala Gly Gly Cys Thr Ala Cys Gly Thr Cys Cys Ala Gly Gly Ala Gly
84           275           280           285
86 Cys Gly Cys Ala Cys Cys Ala Thr Cys Thr Thr Cys Thr Thr Cys Ala
87           290           295           300
89 Ala Gly Gly Ala Cys Gly Ala Cys Gly Gly Cys Ala Ala Cys Thr Ala
90 305           310           315           320
92 Cys Ala Ala Gly Ala Cys Cys Cys Gly Cys Gly Cys Cys Gly Ala Gly
93           325           330           335
95 Gly Thr Gly Ala Ala Gly Thr Thr Cys Gly Ala Gly Gly Cys Gly
96           340           345           350
98 Ala Cys Ala Cys Cys Cys Thr Gly Thr Gly Ala Ala Cys Cys Gly
99           355           360           365
101 Cys Ala Thr Cys Gly Ala Gly Cys Thr Gly Ala Ala Gly Gly Gly Cys
102           370           375           380
104 Ala Thr Cys Gly Ala Cys Thr Thr Cys Ala Ala Gly Gly Ala Gly Gly
105 385           390           395           400
107 Ala Cys Gly Gly Cys Ala Ala Cys Ala Thr Cys Cys Thr Gly Gly Gly
108           405           410           415
110 Gly Cys Ala Cys Ala Ala Gly Cys Thr Gly Gly Ala Gly Thr Ala Cys
111           420           425           430
113 Ala Ala Cys Thr Ala Cys Gly Gly Thr Gly Gly Ala Thr Cys Cys Gly
114           435           440           445
116 Gly Thr Gly Cys Thr Ala Gly Cys Ala Ala Cys Ala Gly Cys Cys Ala
117           450           455           460
119 Cys Ala Ala Cys Gly Thr Cys Thr Ala Thr Ala Thr Cys Ala Thr Gly
120 465           470           475           480
122 Gly Cys Cys Gly Ala Cys Ala Ala Gly Cys Ala Gly Ala Ala Gly Ala
123           485           490           495
125 Ala Cys Gly Gly Cys Ala Thr Cys Ala Ala Gly Gly Thr Gly Ala Ala
126           500           505           510
128 Cys Thr Thr Cys Ala Ala Gly Ala Thr Cys Cys Gly Cys Cys Ala Cys
129           515           520           525
131 Ala Ala Cys Ala Thr Cys Gly Ala Gly Gly Ala Cys Gly Gly Cys Ala
132           530           535           540
134 Gly Cys Gly Thr Gly Cys Ala Gly Cys Thr Cys Gly Cys Cys Gly Ala
135 545           550           555           560
137 Cys Cys Ala Cys Thr Ala Cys Cys Ala Gly Cys Ala Gly Ala Ala Cys

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/506,925

DATE: 09/17/2004

TIME: 15:30:17

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09172004\J506925.raw

```

138          565          570          575
140 Ala Cys Cys Cys Cys Cys Ala Thr Cys Gly Gly Cys Gly Ala Cys Gly
141          580          585          590
143 Gly Cys Cys Cys Cys Gly Thr Gly Cys Thr Gly Cys Thr Gly Cys Cys
144          595          600          605
146 Cys Gly Ala Cys Ala Ala Cys Cys Ala Cys Thr Ala Cys Cys Thr Gly
147          610          615          620
149 Ala Gly Cys Thr Ala Cys Cys Ala Gly Thr Cys Cys Gly Cys Cys Cys
150 625          630          635          640
152 Thr Gly Ala Gly Cys Ala Ala Ala Gly Ala Cys Cys Cys Cys Ala Ala
153          645          650          655
155 Cys Gly Ala Gly Ala Ala Gly Cys Gly Cys Gly Ala Thr Cys Ala Cys
156          660          665          670
158 Ala Thr Gly Gly Thr Cys Cys Thr Gly Cys Thr Gly Gly Ala Gly Thr
159          675          680          685
161 Thr Cys Gly Thr Gly Ala Cys Cys Gly Cys Cys Gly Cys Cys Gly Gly
162          690          695          700
164 Gly Ala Thr Cys Ala Cys Thr Cys Thr Cys Gly Gly Cys Ala Thr Gly
165 705          710          715          720
167 Gly Ala Cys Gly Ala Gly Cys Thr Gly Thr Ala Cys Ala Ala Gly Thr
168          725          730          735
170 Ala Ala
174 <210> SEQ ID NO: 2
175 <211> LENGTH: 738
176 <212> TYPE: PRT
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: Peridot of fluorescence protein
183 <400> SEQUENCE: 2
184 Ala Thr Gly Gly Thr Gly Ala Gly Cys Ala Ala Gly Gly Gly Cys Gly
185 1 5 10 15
187 Ala Gly Gly Ala Gly Cys Thr Gly Thr Thr Cys Ala Cys Cys Gly Gly
188 20 25 30
190 Gly Gly Thr Gly Gly Thr Gly Cys Cys Cys Ala Thr Cys Cys Thr Gly
191 35 40 45
193 Gly Thr Cys Gly Ala Gly Cys Thr Gly Gly Ala Cys Gly Gly Cys Gly
194 50 55 60
196 Ala Cys Gly Thr Ala Ala Cys Gly Gly Cys Cys Ala Cys Ala Ala
197 65 70 75 80
199 Gly Thr Thr Cys Ala Gly Cys Gly Thr Gly Thr Cys Cys Gly Gly Cys
200 85 90 95
202 Gly Ala Gly Gly Gly Cys Gly Ala Gly Gly Gly Cys Gly Ala Thr Gly
203 100 105 110
205 Cys Cys Ala Cys Cys Thr Ala Cys Gly Gly Cys Ala Ala Gly Cys Thr
206 115 120 125
208 Gly Ala Cys Cys Cys Thr Gly Ala Ala Gly Thr Thr Cys Ala Thr Cys
209 130 135 140
211 Thr Gly Cys Ala Cys Cys Ala Cys Cys Gly Gly Cys Ala Ala Gly Cys
212 145 150 155 160

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/506,925

DATE: 09/17/2004

TIME: 15:30:17

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09172004\J506925.raw

```

214 Thr Gly Cys Cys Cys Gly Thr Gly Cys Cys Cys Thr Gly Gly Cys Cys
215                               165                               170                               175
217 Cys Ala Cys Cys Cys Thr Cys Gly Thr Gly Ala Cys Thr Ala Cys Cys
218                               180                               185                               190
220 Thr Thr Cys Gly Gly Cys Thr Ala Cys Gly Gly Cys Cys Thr Gly Ala
221                               195                               200                               205
223 Thr Gly Thr Gly Cys Thr Thr Cys Gly Cys Cys Cys Gly Cys Thr Ala
224       210                               215                               220
226 Cys Cys Cys Cys Gly Ala Cys Cys Ala Cys Ala Thr Gly Ala Ala Gly
227 225                               230                               235                               240
229 Cys Ala Gly Cys Ala Cys Gly Ala Cys Thr Thr Cys Thr Thr Cys Ala
230                               245                               250                               255
232 Ala Gly Thr Cys Cys Gly Cys Cys Ala Thr Gly Cys Cys Cys Gly Ala
233                               260                               265                               270
235 Ala Gly Gly Cys Thr Ala Cys Gly Thr Cys Cys Ala Gly Gly Ala Gly
236       275                               280                               285
238 Cys Gly Cys Ala Cys Cys Ala Thr Cys Thr Thr Cys Thr Thr Cys Ala
239       290                               295                               300
241 Ala Gly Gly Ala Cys Gly Ala Cys Gly Gly Cys Ala Ala Cys Thr Ala
242 305                               310                               315                               320
244 Cys Ala Ala Gly Ala Cys Cys Cys Gly Cys Gly Cys Cys Gly Ala Gly
245       325                               330                               335
247 Gly Thr Gly Ala Ala Gly Thr Thr Cys Gly Ala Gly Gly Gly Cys Gly
248       340                               345                               350
250 Ala Cys Ala Cys Cys Cys Thr Gly Gly Thr Gly Ala Ala Cys Cys Gly
251       355                               360                               365
253 Cys Ala Thr Cys Gly Ala Gly Cys Thr Gly Ala Ala Gly Gly Gly Cys
254       370                               375                               380
256 Ala Thr Cys Gly Ala Cys Thr Thr Cys Ala Ala Gly Gly Ala Gly Gly
257 385                               390                               395                               400
259 Ala Cys Gly Gly Cys Ala Ala Cys Ala Thr Cys Cys Thr Gly Gly Gly
260       405                               410                               415
262 Gly Cys Ala Cys Ala Ala Gly Cys Thr Gly Gly Ala Gly Thr Ala Cys
263       420                               425                               430
265 Ala Ala Cys Thr Ala Cys Gly Gly Thr Gly Gly Ala Thr Cys Cys Gly
266       435                               440                               445
268 Gly Thr Gly Cys Thr Ala Gly Cys Ala Ala Cys Ala Gly Cys Cys Ala
269       450                               455                               460
271 Cys Ala Ala Cys Gly Thr Cys Thr Ala Thr Ala Thr Cys Ala Thr Gly
272 465                               470                               475                               480
274 Gly Cys Cys Gly Ala Cys Ala Ala Gly Cys Ala Gly Ala Ala Gly Ala
275       485                               490                               495
277 Ala Cys Gly Gly Cys Ala Thr Cys Ala Ala Gly Gly Thr Gly Ala Ala
278       500                               505                               510
280 Cys Thr Thr Cys Ala Ala Gly Ala Thr Cys Cys Gly Cys Cys Ala Cys
281       515                               520                               525
283 Ala Ala Cys Ala Thr Cys Gly Ala Gly Gly Ala Cys Gly Gly Cys Ala
284       530                               535                               540
286 Gly Cys Gly Thr Gly Cys Ala Gly Cys Thr Cys Gly Cys Cys Gly Ala

```

RAW SEQUENCE LISTING

DATE: 09/17/2004

PATENT APPLICATION: US/10/506,925

TIME: 15:30:17

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09172004\J506925.raw

```

287 545          550          555          560
289 Cys Cys Ala Cys Thr Ala Cys Cys Ala Gly Cys Ala Gly Ala Ala Cys
290          565          570          575
292 Ala Cys Cys Cys Cys Ala Thr Cys Gly Gly Cys Gly Ala Cys Gly
293          580          585          590
295 Gly Cys Cys Thr Cys Gly Thr Gly Cys Thr Gly Cys Thr Gly Cys Cys
296          595          600          605
298 Cys Gly Ala Cys Ala Ala Cys Cys Ala Cys Thr Ala Cys Cys Thr Gly
299          610          615          620
301 Ala Gly Cys Thr Ala Cys Cys Ala Gly Thr Cys Cys Gly Cys Cys Cys
302 625          630          635          640
304 Thr Gly Ala Gly Cys Ala Ala Ala Gly Ala Cys Cys Cys Cys Ala Ala
305          645          650          655
307 Cys Gly Ala Gly Ala Ala Gly Cys Gly Cys Gly Ala Thr Cys Ala Cys
308          660          665          670
310 Ala Thr Gly Gly Thr Cys Cys Thr Gly Cys Thr Gly Gly Ala Gly Thr
311          675          680          685
313 Thr Cys Gly Thr Gly Ala Cys Cys Gly Cys Cys Gly Cys Cys Gly Gly
314          690          695          700
316 Gly Ala Thr Cys Ala Cys Thr Ala Thr Cys Gly Gly Cys Ala Thr Gly
317 705          710          715          720
319 Gly Ala Cys Gly Ala Gly Cys Thr Gly Thr Ala Cys Ala Ala Gly Thr
320          725          730          735

```

322 Ala Ala

326 <210> SEQ ID NO: 3

327 <211> LENGTH: 45

328 <212> TYPE: DNA

329 <213> ORGANISM: Artificial Sequence

331 <220> FEATURE:

332 <223> OTHER INFORMATION: BamHi/5AB-F primer

335 <400> SEQUENCE: 3

336 ggggggatcc gaggctggtg aggacgttgt ctgctgctcg atgtc

45

339 <210> SEQ ID NO: 4

340 <211> LENGTH: 45

341 <212> TYPE: DNA

342 <213> ORGANISM: Artificial Sequence

344 <220> FEATURE:

345 <223> OTHER INFORMATION: Nhe1/5AB-R primer

348 <400> SEQUENCE: 4

349 gggggctagc acctgtccat gtgtaggaca tcgagcagca gacaa

45

352 <210> SEQ ID NO: 5

353 <211> LENGTH: 30

354 <212> TYPE: DNA

355 <213> ORGANISM: Artificial Sequence

357 <220> FEATURE:

358 <223> OTHER INFORMATION: BamHI/CaM F primer

361 <400> SEQUENCE: 5

362 gggggatcca tgcacgacca actgacagaa

30

365 <210> SEQ ID NO: 6

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/506,925

DATE: 09/17/2004

TIME: 15:30:18

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\09172004\J506925.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date